

turelles.' The South American species which is there treated of seems to be in several points even more nearly allied to the Cartilaginous Fishes than that from Africa, particularly in the structure of its almost cartilaginous skeleton, and in the spiral intestinal valve, which, from additional observations made by MM. Bibron and Milne Edwards, appeared to be still more developed than in the *L. annectens*. But it has been found to differ from the last, and from Fishes, in an important particular, that of the heart possessing a double auricle; and also in the rays of the tentacles being of one piece, and not jointed. The structure of the nostril we consider as entirely analogous to that of the organ in Fishes: it is not a respiratory organ in *L. paradoxa*, the double opening is only similar to the valvular separation of the sac in Fishes, and, from the structure of the muscles, would seem to act somewhat similarly, and they will cause the passage to resist or promote the flow of the water through it. The position of the opening to the lungs or air-bladder is also of importance in the consideration of this question, and is in favour of its reptile alliance; but all the modifications of form must be balanced with each other, and additional dissections are required of *L. annectens*, which it may even yet be found necessary to separate and place in Mr. Owen's proposed genus *Protopterus*.

V.—*Commentary on Mr. G. R. Gray's 'Genera of Birds.'*
1840. By H. E. STRICKLAND, Esq., M.A., F.G.S., &c.

[Continued from vol. vi. p. 423.]

P. 26. THE date of Thunberg's genus *Brachyurus* (1743) seems to be a misprint; but not knowing in what work it is defined, I am unable to rectify it.

Myiophonus ought, I think, to be placed among the *Turdinæ* near *Petrocossyphus*.

The Rock Thrushes were first defined by Boié in 1822, under the name of *Monticola*, and afterwards altered by him in 1826 to *Petrocossyphus*. The former name ought therefore to stand, as authors ought no more to alter their own generic names when once published than those of others. But should there be any insuperable objection to the name *Monticola* (of which I am not aware), then the name *Petrocincla*, Vig., 1825, has the next claim. Bonaparte divides the Rock Thrushes into two genera, *Petrocincla* (*P. saxatilis*) and *Petrocossyphus* (*P. cyaneus*). There seems not to be sufficient ground for this separation; but if adopted, a new name should be given to *P. cyaneus*, because the name *Petrocossyphus*, Boié, is a mere synonym of *Petrocincla*, Vig., and should therefore be cancelled.

P. 27. *Turdus novæ-hollandiæ*, Gm., is quoted by Mr. Gray as

the type both of *Oreocinclæ* and of *Aplonis* (p. 40). I cannot at the moment ascertain to which of these genera this bird really belongs, having no specimen of it at hand.

The genus *Cichla*, Wagl., belongs to the *Troglodytinæ*, near *Merulaxis*, and its specific name, *atricapilla*, Lin., should be used instead of *longirostra*, Gm.

The name *Aipunemia*, Sw. (αἰπὺς and κνήμη) should be written *Æpynemia*.

The genus *Malacocercus* (not *Malacocircus*) belongs to the *Sturninæ* rather than the *Crateropodinæ*. The form and colour of the bill and legs show a close affinity to *Acridotheres*. Is not *Timalia Somervillei*, Frankl., a synonym of *Malacocercus striatus*?

P. 28. It is not easy to say where the genus *Icteria* should be classed, but it is clearly out of place among the *Crateropodinæ*, which, when reduced within their natural limits, seem confined exclusively to the old world.

Tanagra capensis, Sparm., seems to be a synonym of *Corvinella corvina*, Shaw (which in that case should be called *C. capensis*, Sparm.). It is certainly not a synonym of *Keropia crassirostris*.

Mr. Gray seems to have omitted the genus *Stenorhynchus*, Gould. (Proc. Zool. Soc. pt. iii. p. 186.)

The genus *Mimeta*, Vig., cannot, I think, be separated from *Oriolus*. Several modern authors have reunited the two genera.

P. 29. The name *Criniger*, Tem., 1820, should be used instead of *Trichophorus*, Tem., which is a later alteration.

The name *Hæmatornis*, Sw., 1831, ought not to supersede the prior name *Ixos*, Tem. Mr. Swainson, in his 'Classif. Birds,' vol. ii. p. 24, discards the genus *Ixos*, Tem., because it is artificial, i.e. it contains species not naturally allied. This is a reason why it should be *restricted*, but not why it should be *cancelled*; for if this principle were admitted, we must discard nearly every generic name of Linnæus. If then the name *Ixos* be used for this restricted group, the word *Hæmatornis* may be retained for the genus of *Falconidæ* so called by Vigors in December 1831 (*Spilornis*, Gray).

After a careful study of the genera *Querula* and *Lipangus*, I feel satisfied that this sub-family *Querulinæ* should merge into that of *Pyroderinæ*, Gray (*Coraciinæ*, Sw.), and secondly, that the *Pyroderinæ* should be placed under the family *Ampelidæ* instead of *Corvidæ*. Notwithstanding what Mr. Swainson says (Flycatchers, p. 73) as to *Coracina* (*Pyroderus*, Gray) being merely the representative among the Crows of *Querula* among the Flycatchers, yet the proportion of parts and total structure of these two birds are so nearly identical, that it is almost a question whether they should be even generically separated. Further, on comparing these birds and *Lipangus* with the *Ampelidæ*, and taking also their geographical range into consideration, it will, I think, be evident to the untheoretical naturalist that the family *Ampelidæ* is their proper abode. The rictal bristles at first sight form an objection, but of these we see traces in several genera of the *Ampelinæ*.

It is very doubtful whether *Lanius nengeta*, Lin., can be quoted as synonymous with *Xolmis polyglotta* (Spix), mili. On comparing a specimen of the latter with Brisson's description of his *Cotinga cinerea* (the foundation of Linnæus's *Lanius nengeta*), taken from Marcgrave, I find neither the black eye-streak nor the white tail-covers which are mentioned by Brisson. That author, moreover, omits to mention the black streak on each side of the chin, and the white basal spot on the remiges of *X. polyglotta*.

P. 30. *Knipolegus* should be written *Cnipolegus* (*k* not being used in Latin).

Vieillot's name *climazura* being of the same date with Spix's name *mystacea* (not *mystax*), and the former word being dog-Latin, it is better to call the bird *Fluvicola mystacea*, Spix.

The *Gubernetes forficatus*, Sw., is the *Muscicapa yiperu* of Lichtenstein, not his *M. vetula*, which last bird is the *Milvulus longipennis*, Sw., and *Muscicapa pullata*, Bon., figured in Spix, vol. ii. pl. 18. The type of *Gubernetes* should therefore be called *G. yiperu* (Licht.), unless Vieillot may have given it an earlier name in quoting Azara.

The generic name *Pitangus*, Sw., 1827, should be used instead of *Saurophagus*, Sw., 1831.

Mr. Gray has transposed the specific names attached to the genera *Saurophagus* and *Scaphorhynchus*. The type of the former genus is the *Lanius sulphuratus*, Lin., and of the latter, *Lanius pitangua*, Lin., both of which are accurately described and figured by Brisson. *Scaphorhynchus pitangua* (Lin.) is the *Megastoma ruficeps* of Swainson, not his *M. flaviceps*, as is proved by the words *aurantia* and *fulva*, applied by Briss. and Lin. to the coronal spot.

The name *Tyrannus* was first used generically by Lacépède in 1799.

It does not appear why Mr. Gray has changed to *Myiobius* the name *Tyrannula*, defined by Mr. Swainson in 1827, and typified by the *Muscicapa barbata*, Gm.

P. 31. Mr. Gray seems to be justified in imposing his name *Pachyrhamphus* on the restricted genus *Pachyrhynchus* of Spix, the latter name being justly cancelled as a mere synonym of *Tityra*, Vieill.

The genuine *Lanius cayanus* of Lin. and Briss. is not the *Psaris cayanensis* of Swainson, but his *P. guianensis*, distinguished by the naked lores, and by having two-thirds of the beak red. I can find no description of Swainson's *P. cayanensis*, but I infer that he means the species with plumed lores, the beak wholly black, and a small black spot on the chin (*Lanius inquisitor*, Olfers, and Licht. Verz., p. 50).

For *Platysteira* write *Platystira* (the *ei* in Greek being made *i* in Latin).

P. 32. For *Leucocirca* write *Leucocerca*.

The genera *Culicivora* and *Setophaga* would be more naturally placed among the *Sylvicolinæ*, as is done by Mr. Swainson, 'Classif.

Birds,' vol. ii. p. 58. The length of the legs, the absence of a spurious quill, and the geographical range of these genera show that they do not belong to the *Muscicapinæ*.

The *Cryptolopha piocephala* should be called *C. ceylonensis*, Sw., as it had been known as the *Platyrrhynchus ceylonensis* of Sw. 'Zool. Ill.' nearly twenty years before Mr. Swainson changed its name to *piocephala*.

I cannot but think it injudicious in Mr. Gray to transpose the names *Butalis* and *Muscicapa*, after Boié and Brehm had referred *M. grisola* to the former and *M. atricapilla* to the latter genus, an arrangement sanctioned by the high authority of Bonaparte.

P. 33. For *Leiothrix* write *Liothrix*.

The name *Pteruthius* of Swainson, to be consistent with etymology, should be written *Ptererythrius* (from *πτερόν* and *έρυθρός*); but should it be thought that this is taking too great a liberty with the original name, we may, at least, venture to write it *Pterythrius*.

The name *Laniisoma*, Sw., 1831, should be used instead of *Ptilochloris*, Sw., 1837. Authors should not be encouraged in changing names, even of their own composition. A father may give his son what name he pleases at baptism; but once given, the law very wisely pronounces that name unalterable.

For *Phænicircus* write *Phænicercus*.

For *Pipraeidea* write *Piproidea*.

P. 34. Mr. Gray has correctly disentangled a difficulty by restoring the name *Procnias* of Hoffmansegg to the *Averanos* (*Chasmarrhynchus*, Tem.). The fact is, that Vieillot having in 1816 given the name *Tersa* to a part of the old genus *Procnias*, this name ought to be retained for the remainder (the *Averanos*); whereas Temminck in 1820 restricted the name *Procnias* to Vieillot's genus, and gave a name of his own to the *Averanos*.

I may remark in passing, that the genus *Tersa* appears to connect the *Ampelidæ* directly with the *Tanagridæ*.

The name *Bombycilla* was first used generically by Vieillot, not by Brisson.

Ptiliogonys, Sw., should be written *Ptilogonys*.

Cuvier, in his 'Règ. An.' vol. i. p. 363, states that the name *Campephaga*, Vieill., was subsequent to his name *Ceblepyris*, but I am not aware in what work the latter name was first published. Indeed, I cannot learn whether Cuvier published any new genera of birds between 1802, when the first volume of his 'Comparative Anatomy' came out, and 1817, when the 'Règne Animal' was published. I should be obliged by any information on this point.

The groups *Campephaginæ* and *Dicrurinæ* seem to belong more naturally to the *Laniadæ* than to the *Ampelidæ*.

Lanius ferrugineus, Gm., seems to be incorrectly quoted under *Oxynotus ferrugineus*, Sw. Latham's description of *L. ferrugineus* exactly agrees with a bird in my collection which is clearly a *Dryoscopus*, Boié; and instead of the dorsal feathers being "very rigid" as in *Oxynotus*, they are very soft and downy.

The permanent specific name of the Malabar *Edolius* should be *paradiseus*, Lin., not *malabaricus*, Gm. It is the *Cuculus paradiseus*, Lin., well figured by Brisson, except that one of the fore toes is reversed in the figure which led to its being considered a *Cuculus*.

Mr. Gray has judiciously restored *Irena* to its place among the *Dicurinae*, whereas Mr. Swainson had made it a sub-genus of *Oriolus*.

The earliest specific name of *Corvinella* is (*Tanagra*) *capensis*, Sparm. This bird has also received the names of *Lanius cissoides*, Vieill., *L. flavirostris*, Sw., and *L. xanthorhynchus* of the Munich Museum.

Collurio not being defined as a genus by Brisson, and the name moreover having been applied by Vigors to a different genus, it is better to retain the name *Enneoctonus* of Boié, who was the first to separate this group generically from the true Shrikes.

P. 36. *Cyclarhis* should be written *Cyclorhis* (κύκλος and ρίς).

The type of *Telophonus* should be called *T. senegalus* (Lin.). It is the *Lanius senegalus*, Lin., and the *L. erythropterus* of Shaw, not of Linnaeus.

Nilaus capensis should be called *N. brubru*, Lath., 1801.

Vanga was first used as a Latin generic name by Vieillot, not by Buffon.

P. 37. The genus *Cracticus*, Vieill. (restr.), ought certainly to enter into the sub-family of *Gymnorhininae*; for though the hooked beak shows an affinity to the Shrikes, yet the majority of its characters and the geographical range show a strong preponderance in favour of its alliance with *Gymnorhina*, Gray.

Pica colliei, as described by Vigors in the 'Zool. Journ.' vol. iv., can hardly be the same as *Cyanurus bullockii*. Mr. Vigors's bird has the throat black instead of white, and its dimensions differ from those given to *C. bullockii* by Wagler. Mr. Gray must also be wrong in quoting *Garrulus ultramarinus*, Bon., under *Cyanurus bullockii*, as Bonaparte, in his Osservazioni sulla 2^{da} ed. Cuv. Règ. An. p. 84, says that it is synonymous with *Pica sieberi*, Wagl., and *Garrulus sordidus*, Sw.

Is not the name *Dysornithia*, Sw., prior to *Perisoreus*, Bon.?

P. 38. For *Crypsirina* write *Crypsirhina*. To the synonyms of *C. varians* add *Colius viridis*, Lath.

P. 39. *Gymnoderus nudus*, Gm., is the *Gracula fætida*, Lin., and the latter specific name therefore has the priority.

Is not Buffon's Pl. Enl. 268. the smaller species of *Gracula* (*Eulabes indicus*, Cuv.), and not the *G. religiosa*, as Mr. Gray makes it?

I should prefer placing the *Graculinae* among the *Sturnidae*, near *Pastor*, to which group they seem much allied in structure.

The genus *Pyrrhocorax* was first defined by Vieillot, not by Brisson.

To the synonyms of *Corcorax* add < *Pyrrhocorax*, Tem.

P. 40. *Megalopterus*, Smith, must be changed, the name being pre-occupied by Boié for a genus of *Sterninae*.

If the *Acridotheres roseus* be generically separated from the rest of

that genus, it should bear the name of *Psaroides* of Vieillot, who was the first to point out the distinction, and Temminck's name *Pastor* should be cancelled, being a mere synonym of *Acridotheres*.

P. 41. The genus *Creadion* surely belongs to the *Meliphagidæ*. Is it not identical with *Neomorpha*, Gould?

The name *Sturnella ludoviciana*, Lin., is preferable to *S. magna*, Lin., the latter name being comparative, and only correct when the bird was classed as an *Alauda*. Besides, the name *ludoviciana* is adopted by Latham, Richardson, Bonaparte, &c.

The genera *Sturnella* and *Amblyrhampus* (not *Amblyrhynchus*), if carefully examined, will be found to belong to the *Icterinæ* rather than to the *Sturninæ*. When thus arranged, the whole of the *Sturninæ* will be confined to the old world, and the *Icterinæ* to the new, thus adding to the numerous instances in which geographical distribution coincides with natural affinities. In the same way I believe it will be found that the characters of *Astrapia* refer it to the oriental group *Lamprotorninæ*, rather than to the American one *Quiscalinæ*, in which Mr. Gray places it.

Is not Vieillot's name *Quiscalus versicolor*, prior to that of *Q. purpureus*, Licht.?

Lesson quotes *Corvus mexicanus*, Gm. (and not *Oriolus*, as Mr. Gray has it,) as the type of his genus *Cassidix*.

The confusion which overhangs several of the black Icterine birds of America is very great, but this is not the place to discuss the entire question. I will therefore merely state that, as far as my investigations go, the *Cassidix mexicanus*, Less. (which, however, is not the *Corvus mexicanus*, Gm.) is identical with the *Scaphidura barita*, Sw. If so, the names *Cassidix* and *Scaphidura* being of equal date, we may be allowed to retain the latter, and expunge the mongrel word *Cassidix*. To the *Scaphidura barita*, Sw., I also refer *Cassicus niger*, Vieill., Gal. Ois. 89. (which, however, is not the *Oriolus niger*, Gm.). Also note that *Scaphidura barita*, Sw., is neither *Gracula barita*, Lin., nor *Gracula barita*, Lath., Syn. pl. 18, Gen. Hist. pl. 44. The *Corvus mexicanus*, Gm., is, I have no doubt, synonymous with *Quiscalus macrurus*, Sw. (See Fernandez's description of his Hocitzanatl quoted by Ray and Brisson.) The *Oriolus niger* of Gmelin, described by Brisson to be under ten inches in length, is a distinct species found in the West Indies, and called *Quiscalus baritus* by Bonaparte. It is, perhaps, the same as *Quiscalus crassirostris*, Sw. The *Gracula barita* of Linnæus (excluding his quotation of Brisson) seems to be known only from his description, and is not the same with *Oriolus niger*, Gm. The *Gracula barita* of Latham, Syn. pl. 18, Gen. Hist. pl. 44, is stated by Bonaparte in his 'American Ornithology' to be identical with *Quiscalus versicolor*, an opinion in which I concur.

Cassicus and *Xanthornus* were first used as genera, not by Brisson, but by Lacépède in 1799.

P. 42. The genus *Euplectes* was first defined by Swainson in 1830 (Zool. Ill. ser. 2.), with *E. orix*, Lin., for its type. Is not this prior to the name *Pyromelana*, Bon.?

Should not the name *Philetærus socius*, Lath., be used instead of *P. lepidus*, Smith?

The restricted genus *Ploceus*, Cuv., if *Loxia philippina*, Gm., be considered its type, will contain the greater part of the genus *Euplectes*, Sw.

P. 43. The genus *Symplectes*, Sw., seems to have a fair claim to generic distinction, a conclusion to which Sir W. Jardine arrived independently of Mr. Swainson, when he gave it the name of *Eupodes*. Mr. Swainson's name, however, was published first, and must therefore be retained.

It appears to me that the genera *Spermospiza*, *Pyrenestes*, *Vidua*, *Estrelda*, *Amadina*, *Spermestes*, and *Erythrura*, ought all to be included in the sub-family *Ploceinæ*. Though the varying development of their beak presents analogies to the *Coccothraustinæ* and *Fringillinæ*, yet their true affinity to *Ploceinæ* is indicated by their peculiarly elevated culmen extending backwards on the forehead, their naked nostrils, their geographical extent, and especially by the spuriousness of their first primary quill, a character often of great value as an index of affinity. Moreover, the genus *Vidua* is directly united to *Ploceus* by means of *V. chrysoptera*, Vieill., and *Ploceus capensis*, Lin.

The *Tanagrinæ* would be better placed at the end of *Fringillidæ*, so as not to separate the *Coccothraustinæ* from the *Fringillinæ*.

There is much confusion in the synonyms of *Tanagra episcopus*, but Mr. Gray is probably right in quoting Pl. Enl. 178. The original *T. episcopus* of Linnæus and Brisson seems to be the *T. sericoptera* of Swainson and the *T. caelestis* of Spix. It is probably also the *Gracula glauca* of Sparrman, though that bird is said to be seven inches long. The *T. episcopus* of Swainson's Birds of Brazil, pl. 39, seems (judging from the figure) to be only the young of his *T. cana*, pl. 37. The *T. caelestis*, Sw., Birds Braz. pl. 41, is very different from *T. caelestis*, Spix, as the wing-covers are green. It is possibly the female of *T. cana*, Sw.

There is no doubt that *Tanagrella multicolor*, Sw., is the *Motacilla velia*, Lin., and the latter specific name should therefore be used.

P. 45. On comparing a specimen of *Leucopygia ruficollis* with Lesson's very short description of his *Cypsnagra hirundinacea*, there can be no doubt of their belonging to the same genus; but as Lesson describes his bird as blue-black above, and says nothing of the white on the rump and wing-covers, I think they cannot be specifically synonymous. I would fain for once break through the law of priority in order to get rid of the intolerable name of *Cypsnagra*, Less., a word compounded more *Gallico* out of *Cypselus* and *Tanagra*!

Is not *Emberiza quadricolor*, Gm., an earlier synonym of *Erythrura prasina* (Sparm.)?

Mr. Gray seems to have omitted the genus *Pytelia*, Sw., type, *P. elegans*, Gm., Vieill. Gal. pl. 64.

P. 46. I do not think it advisable to change the name *Pyrgita*, Cuv., to that of *Passer*, "Ray." Ray does not define *Passer* as a genus, but merely applies it to designate the House Sparrow in com-

mon with many other birds to which it has no affinity. The Sparrows were first defined as a genus by Cuvier, who gave them the name by which the ancient Greeks designated them.

To the synonyms of *Montifringilla* add *Chionospiza*, Kaup.

Ammodramus should be written *Ammodromus*.

P. 47. It does not appear why the name *Melophus cristata* (Vig.) is changed to *M. lathami*, Gray. I see no objection to *cristata*, but if there be any, Sir W. Jardine's name *erythropterus* should be adopted.

The name *Cynchramus* was first used generically, I believe, by Bonaparte.

P. 48. *Agrodroma rufescens*, Tem., should be called *A. campestris*, Bechst.

P. 49. The family *Musophagidæ*, as here constituted, is a very artificial group. The genus *Phytotoma* should certainly be placed next to, if not in, the sub-family *Tanagrinae*. Its beak approaches in form near that of *Spindalis*, Jard., and the dentations of the margin, though very peculiar, have a distant counterpart in the beak of *Euphonia*. Its South American habitat also favours this view of arrangement.

The *Coliinae* certainly seem to form a *caput mortuum*, which no analysis has yet been able to bring within the limits of any other family of *Conirostres*. They may therefore be raised to the rank of a family with the title of *Coliidae*.

The sub-family *Musophaginae* ought, I conceive, to be placed in the family *Cuculidæ*. It decidedly belongs to the *Scansores*, for live specimens of *Turaco* invariably perch with two toes behind the branch. In the structure of their beak and legs they show considerable affinity to the *Cuculidæ*, especially to the genera *Phenicophæus* and *Crotophaga*. It will be recollected too that the Cuculide genus *Saurothera* has the bill dentated.

Mr. Gray is quite correct in quoting Edwards, pl. 7, under *Turaco persa* (Lin.). The descriptions of *Cuculus persa* given by Linnæus and Brisson are taken from Edwards, and are based on the very rare species with a *green crest margined with red* (*C. buffoni* of Swainson, but not of Vieillot nor of Jardine, which is the *purpureus*, Less., and *senegalensis*, Sw.). There is a specimen of the true *T. persa* in Lord Derby's collection. The name *persa* is commonly but erroneously given to the species with a *green crest margined with white*. This species has never received a distinct appellation, and I therefore recommend that it be called *T. albocristatus*. Stephens's name *africanus* cannot be correctly used for it, for his description is inapplicable to any known species, and is a *mélange* of the descriptions of *T. albocristatus* and *T. persa*.

P. 50. According to the laws of Latinity, *Tockus* should be written *Toccus*, and *Ramphastos*, *Rhamphastos*.

The genus *Scythrops*, though it reminds us at first sight of the *Rhamphastidæ*, yet is much more nearly allied to the *Cuculidæ*, as shown by the position of the nostrils, the red space round the eyes, the form of the wings and feet, and the geographical habitat. *Phæ-*

nicophæus forms its nearest affinity, but in the pointed wings and colour of the plumage it approaches *Cuculus*.

P. 51. The group *Psittacara*, as defined by Vigors in the Zool. Journ. vol. ii., seems sufficiently distinguishable from *Conurus*, Kuhl, to be retained as a genus.

For *Centrourus* write *Centrurus*. Mr. Gray has mistaken the type of this genus as defined by Swainson, which is the *Nestor meridionalis* (Gm.) (*N. hypopolius*, Wagl., *Psittacus australis*, Shaw, Mus. Lev. 87); consequently *Centrourus*, Sw., merges into a synonyme of *Nestor*, Wagl. The *Psittacus australis* of Latham (*P. concinnus*, Shaw) is hardly to be distinguished generically from *Trichoglossus*, but if made distinct, will require a new name.

P. 52. The specific name of *Psittacodis* should be *paraguanus*, Gm., not *paragua*, Marcgrave, the latter name being antecedent to the system of binomial nomenclature.

For *Poiiocephalus* write *Pæocephalus*, the *oi* in Greek becoming *æ* in Latin and *e* in English. (Hence the term *poikilitic*, lately introduced in Geology, should be written *pecilitic*, as we write *economy* and not *oikonomy*.)

Mr. Gray seems to have omitted a genus of *Loriinæ* which wants a name. It is the *Psittaculus* of Swainson, and is typified by *P. vernalis*, *galgulus*, and *rubrifrons*.

P. 53. Mr. Gray very properly restores the name *Agapornis*, Selby, to its true type, from which Mr. Swainson had removed it and applied it to the American group *Psittacula*.

The name *Psittacula* should be quoted on the authority of Brisson, not of Kuhl. Brisson divides the genus *Psittacus* into six subgenera, which, *being based on definitions*, may be retained on Brisson's authority. These are *Ara*, *Cacatua*, *Lorius*, *Psittacus*, *Psittaca*, and *Psittacula*. The name *Psittaca*, however, being too near in sound to *Psittacus*, is not retained.

Pl. Enl. 455. f. 1, quoted by Mr. Gray under *Psittacula passerina*, is the basis of *P. capensis*, Gm., so named from a mistake in the habitat. This bird is named *guianensis* by Mr. Swainson, who considers it distinct from *passerinus*, Lin., which he calls *cyanopterus*. The chief distinction is that the *guianensis*, Sw. (*capensis*, Gm.), has the rump *green*, while in the *passerinus*, Lin. (*cyanopterus*, Sw.), it is *blue*.

The bird figured in Phillips, Voy. Bot. Bay, p. 267, pl. 40, is not the *Calyptorhynchus banksii* (Lath.), but the *C. cookii* (Tem.).

The name *Corydon*, Wagl., cannot stand, as it was pre-occupied in 1828 by Lesson (Man. Orn. vol. i. p. 177). A new name will therefore be wanted for *Corydon*, Wagl.

Psittacus nestor was, I believe, never published by Forster under the name of *hypopolius*, consequently the name *meridionalis*, Gm., has the priority.

The sub-families composing the family *Picidæ*, as arranged by Mr. Gray, are not of equivalent value. The *Bucconinæ*, *Picumninæ* and *Yuncinæ* form three groups apparently of equal value, and the Woodpeckers form a fourth; but the *Picinæ*, *Dryocopinæ*, *Celeinæ* and *Co-*

laptinæ are only subdivisions of the group Woodpeckers. These last should therefore be united into one sub-family *Picinæ*, or, if divided, they should form groups of a lower denomination than a sub-family.

P. 54. Mr. Gray is quite right in keeping the name *Picumnus*, Tem., for the American group (*Asthenurus*, Sw.), because Temminck evidently regarded this as the type of his genus, making it the first division, and giving the name *abnormis* to the Asiatic group (*Picumnus*, Sw., *Microcolaptes*, Gray).

Mr. Gray quotes Rich. Faun. Bor. Am. pl. 56. for *Picoides tridactylus* (Gm.), but Richardson's bird is the *P. hirsutus* (Vieill.), which Bonaparte considers as distinct from the European *P. tridactylus*.

Hemicircus should be written *Hemicercus*.

It does not appear why a new name is given to the genus *Dendrocopus*, proposed by Boié and sanctioned by Bonaparte, the name *Dendrocopus*, Vieill., being superseded by *Dendrocolaptes*.

The name *Dendromus* is pre-occupied for a genus of Mammalia by Dr. Smith in Zool. Journ. vol. iv. p. 438.

Mr. Gray seems to unite the American *Dryotomi* of Swainson with the European group *Dryocopus*, Boié (*D. martius*), and indeed they can hardly be distinguished in structure, though Bonaparte keeps them separate.

P. 55. The name *Tiga*, Kaup., 1836 (Thierreich, vol. ii. p. 37), must supersede *Chrysonotus*, Sw., 1837. The species will then stand as *Tiga tridactyla* (Sw.).

After the Green Woodpeckers have been distinguished as *Gecinus*, Boié, Swainson's genus *Brachylophus* still includes two well-marked groups: first, the Short-thumbed Woodpeckers closely allied to *Tiga*, containing 1. *P. aurantius*, Lin. (*P. bengalensis*, Gm.); 2. *P. goensis*, Gm.; 3. *P. philippinarum*, Lath.; 4. *P. hæmatribon*, Wagl., and 5. *P. erythronotus*, Vieill. To this group I would propose the name *BRACHYPTERNUS*. The remaining group contains the Crimson Woodpeckers, *P. miniatus* and *puniceus*. I am not aware whether Boié includes these species in his genus *Gecinus*; but if not, they may retain the restricted name *Brachylophus*, Sw., which in that case, not being precisely equivalent to *Gecinus*, Boié, would escape obliteration as a synonyme.

It is not easy to decide which of the specific names of *Geococcyx* has the priority. Mr. Swainson states (Classif. Birds, vol. ii. pp. 140, 325), that he named it *longicauda* in the Catalogue of Bullock's Mexican Museum in 1824. If, however, it was merely named at that time and not described, the name cannot be considered to have acquired a right of priority, as the slovenly practice of merely reciting the names of new species without defining their characters (for many examples of which see Lesson's *Traité d'Ornithologie*) cannot be too much discouraged, as it only tends to choke up the science with synonymes. It does not appear whether Blainville ever published this species under the name of *Saurothera bottæ*, and therefore the name *californiana* used by Lesson in his Supplement to Buffon some

time previously to 1831, will probably turn out to have the prior claim to all others.

P. 56. The *Centropus ægyptius* (Gm.) seems to be the same as *C. senegalensis* (Lin.), which latter name will therefore prevail.

The name *Coua*, Levaill., was, I believe, never used as a Latin word, and therefore ought not to supersede *Serisomus*, Sw.

The *Cuculus guira*, Gm., distinguished by having only eight feathers in the tail, ought surely to be generically separated from the "four-winged Cuckoos" (*Diplopterus*, Boié). The former constitutes the group *Guira*, Less., 1831, of which *Octopteryx*, Kaup., 1836, and *Ptiloleptus*, Sw., 1837, are synonymes. The type will stand as *Guira piriragua* (Vieill.), *Cuculus guira*, Gm., *Ptiloleptus cristatus*, Sw.

P. 57. Should not *Ptilonopus* be written *Ptilopus*? (from *πίλον* and *πούς*).

Is *Treron*, Vieill., prior to *Vinago*, Cuv.? Cuvier says of the latter name, "Vieillot has changed it to *Treron*."

P. 58. *Turtur* was first used as a generic name by Mr. Selby in 1835.

The name of the first genus of *Gourinæ* should be altered from *Peristera*, Sw., to *Phaps*, Selby, and the second from *Leptoptila*, Sw., to *Peristera*, Sw. In 1827 Mr. Swainson defined an American group as *Peristera*, and in 1835 Mr. Selby defined an Australian group as *Phaps*. So far all was well; but in 1837 Mr. Swainson thought proper to transfer his name *Peristera* to the *Phaps* of Selby, and to give a new name, *Leptoptila* (misspelt *Leptotila*), to the genus which he had previously called *Peristera*. It behoves the advocates of the *priority* principle to discountenance such wanton changes by bringing back these genera to their original designations.

The specific name *jamaicensis*, Lin., should supersede *rufaxilla*, Wagl.

P. 59. I see no reason why the name *Geophilus*, Selby (restr.), should not be retained for the *Columba nicobarica*, as Dr. Fleming did not include it in his genus *Verrulia*, and consequently *Geophilus* is not the precise equivalent of *Verrulia*.

To the synonymes of *Goura*, Flem., add *Megapelia*, Kaup.

Chamapetes should be written *Chamæpetes*.

If *Mitu* be retained as a generic name, it should be Latinized into *Mitua*. Lesson is, I believe, the first author who attached the name of *Mitu* to a genus, and it should therefore be quoted on his authority, not on Marcgrave's.

P. 60. *Syrmaticus reevesi* ought to bear the name of *S. superbus* (Lin.). There can be no doubt that this is the species intended by Linnæus, though his description of his *Phasianus superbus*, taken from Chinese documents, is by no means accurate. We have the authority of Temminck and Sir W. Jardine for this identification.

To the synonymes of *Euplocomus* add *Spicifer*, Kaup., 1836.

The Impeyan Pheasant is the true type of *Lophophorus*, Tem., 1813, and this name should therefore supersede *Monaulus*, Vieill.

The *Phasianus leucomelas*, Lath., if generically distinct, must have a new generic name.

It is not correct to quote *Lophyrus*, Steph., as a synonyme of *Lophophorus*, the word *Lophyrus* being merely a mistake of the artist who engraved Stephens's plate 36, vol. xiv.

P. 61. *Francolinus* was first defined as a genus by Stephens, 1819.

It is to be regretted that the legitimate name *Arboricola* had not occurred to Mr. Hodgson instead of the hybrid word *Arborophila*, but it is too late to change it.

Coturnix was first used generically by Cuvier about 1802.

For *Ptilophachus* write *Ptilopachys*.

The name *Cryptonyx*, Tem., 1815, is prior to *Liponyx*, Vieill., 1816.

P. 62. Brisson does not use *Bonasa* to designate a genus, and the name *Bonasia*, Bon., may therefore be retained.

P. 63. The *Turnicinæ* would range more naturally among the *Tetraonidæ* than among the *Tinamidæ*.

For *Rhyncotus* read *Rhynchotus*.

P. 64. The family *Charadriadæ* ought to be in contact with *Scolopacidæ*, although most modern authors interpose the *Ardeidæ* between them.

It is very doubtful whether *Ædicnemus magnirostris*, Tem., Pl. Col. 387, can be correctly quoted as the type of *Burhinus*, Ill. Latham described a bird under the name of *Charadrius magnirostris*, "the size of the Golden Plover, bill stout and very broad, resembling the Tody genus." From this description Illiger founded his genus *Burhinus*. Wagler, in his monograph of *Charadrius*, quotes Latham's description, and places it among his "species à me non visæ."

He also describes as a distinct species the *Ædicnemus magnirostris*, Tem., under the name of *Charadrius magnirostris*. This bird is described as from 17 to 20 inches long, with the beak much longer, stronger and more compressed than the other *Ædicnemi*, and it seems therefore quite distinct from *C. magnirostris*, Lath. Lesson, however, unites the two in his genus *Burhinus*, and in order to admit Temminck's bird he greatly modifies the original definition of that genus; for instead of the "*Rostrum latum, depressum*" of Illiger, we find in Lesson "*bec très comprimé sur les côtés*." It would seem then that the true *Burhinus* of Illiger, if such a bird really exists, has yet to be discovered, and that a new generic name is wanted for the *Ædicnemus magnirostris* of Temminck.

To the synonymes of *Ortygodes*, Vieill., add *Ortyxelos*, Vieill.

The *Hemipodius nivosus*, Sw., has the neck and breast ferruginous with white spots, and is therefore perhaps distinct from *Ortygodes meiffreni*.

The earliest specific name of *Pluvianus melanocephalus* (Gm.), is *P. ægyptius* (Lin.).

P. 65. The specific name of *Squatarola*, viz. *cinerea*, Ray, ought not (for reasons above given) to supersede Linnæus's name *helvetica*.

Lesson, in his *Traité d'Ornithologie*, has made it almost certain

that the *Corrira italica*, Gm., is the *Dromas ardeola*, Paykull; but as long as any doubt remains, it is better to retain the latter name as Mr. Gray has done.

P. 66. The four genera, *Egretta*, *Ardeola*, *Botaurus* and *Nycticorax*, originated, not with Brisson, but the two first with Bonaparte, and the two last with Stephens.

For *Tigrisoma lineata* read *T. lineatum*. (All words ending with *soma*, *stoma*, &c., are neuter.)

Ought not the genus *Herodias*, Boié, as restricted by Bonaparte, to be kept distinct from *Egretta*?

P. 67. For *Leptoptilos* write *Leptoptilus*. (The terminal *os* in Greek is always made *us* in correct Latin.)

The specific name *argala* is Latham's, not Gmelin's; but as Gmelin's name *dubia*, though prior, implies an erroneous proposition, for the species is *not* dubious, Latham's name may be allowed to stand.

The genus *Ibis* was founded, not by Brisson, but by Lacepède.

The genus *Falcinellus*, attributed to "Ray," is, I believe, now first established by Mr. Gray. If retained, a new specific name will be wanted for the European bird, as Colonel Sykes is of opinion (Proc. Com. Zool. Soc. pt. ii. p. 161) that the *Tantalus igneus*, Gm., is distinct from *T. falcinellus*, Lin. It would, however, be far better to give a new name to this genus, if a genus it be, the name *Falcinellus* being pre-occupied by Cuvier, who asserts that Vieillot changed it to *Erolia*.

P. 68. The genus *Numenius*, "Ray," was founded by Latham.

Limosa, "Briss.," was first used generically, I believe, by Leisler, and *Totanus*, "Ray," by Cuvier, 1802.

The name *Guinetta*, "Briss.," is now first used generically by Mr. Gray, and therefore should not supersede *Actitis*, Ill., as restricted by Boié.

P. 69. For *Macroramphus* write *Macrorhamphus*.

P. 70. I have been quite unable to reduce the synonymes of the genus *Rhynchæa* into order, and Mr. Gray would do a good work if he would publish a monograph of this genus with all the synonymes at full length, and with the distinctive characters of the species.

Mr. Gray must be in error when he unites the *Scolopax paludosa*, Gm. (*S. undulata*, Bodd.) with *S. sabini*, Vig. Bonaparte, in his elaborate monograph of the genus *Scolopax*, in the 'Osserv. Cuv. Règ. An.' p. 123, describes *S. paludosa*, Gm., as having the beak $3\frac{1}{2}$ inches long, and the lateral rectrices "angustissimi, acuminati," characters which do not apply to *S. sabini*, which Bonaparte there calls (after Vieillot) *S. sakhalina*.

I cannot approve of separating *Scolopax gallinula*, Lin., generically from the other Snipes; but those who do so should retain the name *Gallinago* (founded by Stephens) for the true Snipes, and call the *S. gallinula*, *Philolimnus*, Boié. At any rate, the specific name *gallinula*, Lin., should not be superseded by a term used previously to the binomial System.

The specific name *lobatus*, Wils., should not be given to *Steganopus*, because it was used by Wilson under the erroneous impression

that this bird was the *Tringa lobata*, Gm. The specific name *wilsoni*, Sab., seems to be next in priority, and should therefore stand.

Is *Steganopus*, Vieill., prior to *Holopodius*, Bon. ?

The family *Palamedeidae* will probably require to be remodelled. Although not prepared to go into details at present, I think it probable that the *Parrinae* and *Palamedeinae* would be better arranged under *Rallidae*, and *Megapodinae* divided between the *Turdidae* and the *Cracidae*.

P. 71. The earliest specific name of *Menura*, is *superba*, given by Davies in the Linnean Transactions in 1800.

The term *Ortygometra*, or "Mother of the Quails," was an old name applied by Aristotle, Aldrovandus, Ray and Brisson to the Corn Crake; therefore, when Bechstein divided these short-beaked Rails from the rest of the genus *Rallus*, no term could have been more appropriate; but unfortunately he neglected to use it, and preferred the term *Crex*. Now as Bechstein was the first to define the genus, the name *Crex* must be retained, and *Ortygometra* cancelled, since it would not be correct to retain the latter (as Bonaparte does) for the remaining group (*Porzana*, Vieill.), in which the Corn Crake is not included.

The name *Ocydromus australis* (Sparm.) has the priority of publication over *O. troglodytes*, Gm.

P. 72. The genus *Gallinula* was founded by Latham.

The *Heliorninae* would, I think, enter more naturally among the *Colymbidae* than among the *Rallidae*, though they certainly connect the two groups.

The *Phænicopterinae* ought not to be included in the *Anatidae*. They surely form too marked a group to be placed on a par with the subdivisions of Linnæus's genus *Anas*. They should rather be made into a distinct family, and be placed near the *Ardeadae*, to some of which (*Platalea* and *Ibis*) they show an affinity in the scarlet plumage, a colour wholly unknown among the *Anatidae*.

P. 73. *Chlæphaga* should be written *Chloëphaga*.

The genus *Bernicla*, "Briss.," was founded by Stephens, 1824, and *Cygnus*, "Briss.," by Vieillot, 1816.

P. 74. *Querquedula* owes its foundation as a genus to Stephens, 1826.

To the synonymes of *Micropterus cinereus* add *Oidemia patachonica*, King.

Oidemia should be written *Ædemia*. Add to its synonymes *Maceranas*, Less.

To the synonymes of *Somateria* add *Platypus*, Brehm.

The genera *Fuligula* and *Harelda* were first published by Stephens, 1824.

For *Kamptorhynchus* write *Camptorhynchus*.

P. 76. The *Mergidae* should not be regarded as a distinct family from the *Anatidae*; they are only narrow-beaked Ducks, forming a subfamily allied to *Fuligulinae*.

For *Podicepsinae* write *Podicipinae*.

It surely savours of hypercriticism to divide the Little Grebes (*Sylbeocyclus*, Bon.) from *Podiceps*.

P. 77. The generic name *Catarrhactes*, Briss., should be used instead of *Eudypetes*, Vieill., and the specific name *demersus*, Lin., instead of *chrysocome*, Forst. This genus *Catarrhactes* of Brisson is prior in date to Brunnich's genus, which he called *Catarrhacta* (*Lestris*, Ill. restr.).

The genus *Mergulus* was first defined by Vieillot, 1816.

An *h* should be inserted after the *r* in *Synthliboramphus* and *Ptychoramphus*.

P. 78. *Wagellus*, "Ray," is now first introduced as a genus by Mr. Gray, and therefore should not supersede *Fulmarus*, Leach.

The name *Catarrhacta*, Brunn., being too near *Catarrhactes*, Briss., should give way to *Lestris*, Ill.

P. 79. *Chroicocephalus* should be written *Chræcocephalus*.

The name *Gygis alba* (Sparr.) is prior in date of publication to *G. candida* (Forst.).

The true type of *Viralva*, Leach, as exhibited by Stephens, is the Black Tern (*Sterna nigra*, Lin.). Therefore Boié's name *Gelochelidon* should be retained for the genus which contains *Sterna anglica*, Mont., and the name *Viralva* (first published in 1825) sinks into a synonyme of *Hydrochelidon*, Boié, 1822, which is typified by *S. nigra*, Lin. Also note that *Anous*, Leach, is synonymous with *Megalopterus*, Boié, and not with *Hydrochelidon*, Boié, and that *Anous niger*, Leach, is synonymous, not with *Sterna nigra*, Lin., but with *Megalopterus stolidus* (Lin.), Boié.

The genera *Thalasseus*, Boié, *Gygis*, Wagl., *Sternula*, Boié, and *Hydrochelidon*, Boié, appear not to possess structural characters sufficient to entitle them to generic separation from *Sterna*.

P. 80. The genera *Sula* and *Fregata* were first raised to that rank by Lacepède in 1799.

In concluding this Commentary an apology is due for the length to which it has extended, but I felt it impossible to do justice to Mr. Gray's book without going into considerable detail. I should be sorry if any person should be led by the *number* of these criticisms to form an unfavourable idea of the general accuracy of the work. A large proportion of the above remarks rest on questions of *opinion*, in which Mr. Gray is perhaps as likely to be right as I am; and even where I have detected errors, they are only such as are unavoidable in the first edition of a work in which so much labour and research is compressed into so small a compass. I conclude therefore with most heartily recommending the 'Genera of Birds' to the favourable notice of zoologists.

POSTSCRIPT.—I beg to add one or two remarks which have occurred to me since this Commentary went to press.

Page 1 of Mr. Gray's book. In my remarks on the *Vulturinæ* I had not noticed that Temminck has proved the *Ægyptius* of Savigny to be only the young of the *Vultur auricularis*, Daud. (See Tem. Man. Orn. part iv. p. 586.) Therefore the generic name *Ægyptius* should be given to the group containing *V. auricularis* and *pondicerianus*.

P. 4. *Asturina cinerea*, Vieill., is said by Cuvier to be the same as *Falco nitidus*, Tem., Pl. Col. 87. If this be the case, *Asturina* might

stand as a distinct genus, being quite different from *Cymindis*. (N.B. Temminck's Pl. Col. 87. can hardly be the *F. nitidus* of Latham, whose expression "legs long," agrees better with the *F. hemidactylus*, Tem. Pl. Col. 3.)

The genus *Astur* was founded by Lacepède in 1799, and is therefore clearly prior to *Dædalion*, Sav.

VI.—MR. SHUCKARD on his falsely alleged participation in Mr. Swainson's *views of Natural Arrangement*.

To the Editors of the *Annals and Magazine of Natural History*.

GENTLEMEN,

I APPEAL to you to do me justice against the impression that may be made by what professes to be an "Analytical notice of the 129th volume of Lardner's Cabinet Cyclopædia, entitled, 'On the History and Natural Arrangement of Insects,' by *William Swainson*, F.R.S., &c., and *W. E. Shuckard*, Libr. R.S., &c., published in the 3rd Number of 'The Entomologist,' written by Mr. Newman."

In an advertisement prefixed to this volume of Lardner, dated from my residence, and of course emanating from me, I said, "Those paragraphs in this volume with the initials '*W. E. Sh.*' are written by Mr. Shuckard, and where several 'of these follow each other they are affixed to the last only; 'but the system of classification is exclusively Mr. Swainson's." Now, notwithstanding this, which it will be seen below that the 'Analyst' was aware of, he says in the first page of his notice*, "I will now endeavour to show the views 'entertained by *Messrs. Swainson and Shuckard* on the subject:" thus clearly identifying me with the whole scheme, for following this is given the dry systematic frame of the work. He then says, "A glance at this arrangement will 'convince the reader that no charge of plagiarism can possibly be brought against its *authors*:" thus confirming my identification with the system: and a line or two beneath this he again says, "If the views of *Messrs. Swainson and Shuckard* 'display the slightest approach to nature, then are those of 'Mr. Macleay the most distorted, wild and unnatural: there 'is no point of similarity between the systems, except the 'frequent recurrence of the number Five. The bold alteration made by the *authors* in separating the Diptera from 'winged insects, is the most striking feature in the new arrangement; it proves *them* to be profound and original 'thinkers, and not only this, it displays an indifference to the

* The Entomologist, No. III. p. 38.